

APPLICANT:
Ericsson Radio Systems AB

Exhibit 6
Test Report
FCC ID NO.
B5KKRC16145

Test report

<u>Exhibit No.</u>	<u>Paragraph. Ref.</u>	<u>Description</u>
6	2.1046 (a)	RF Power Output
	2.1047 (a, b, d)	Modulation Characteristics
	2.1049 (h)	Occupied Bandwidth
	2.1051, 2.1053	Spurious Emissions
	2.1055 (a, b, d)	Frequency Stability

All tests were performed at Ericsson Microwave Systems AB in Molndal, Gothenburg during 8th to 12th of Nov 1999.

RF POWER OUTPUT

2.1046(a) RF Power Output

The RF power at the output terminals (antenna connector)
at the highest and lowest power levels are.

Channel	Frequency (MHz)	Power Level	Power (dBm)
512	1930.2	P(0)	21.92
512	1930.2	P(7)	7.47
661	1960.0	P(0)	22.57
661	1960.0	P(7)	8.08
810	1989.8	P(0)	22.28
810	1989.8	P(7)	7.82

The measurement was made per PN3389 Vol 1 using the following equipment:

Radio Frequency 50 ohm load attached to the output.

Equipment used:

BOONTON 4500 Peak power meter (Inv no YE 2396)
BOONTON 56526 peak power sensor (Inv no YE 2397)
RF – Box, Power 1800/1900 LPY 107610

MODULATION CHARACTERISTICS

2.1047(a,b,d) The modulation characteristics are measured as the phase error according to PN3389 Vol 1.

Channel	Frequency (MHz)	Phase error RMS (degree)	Phase error Peak (degree)
512	1930.2	2.74	9.1
661	1960.0	2.51	9.54
810	1989.8	2.52	8.71

Equipment used:
Anritsu GSM tester MS8604A (Inv. no. YG 0690)
RF – Box, Power 1800/1900 Ericsson (LPY 107610)

OCCUPIED BANDWIDTH

2.1049 (h) Occupied Bandwidth

Modulation spectrum with GMSK modulation at 270.8 Kbit/s is shown in Occupation Bandwidth plot 1-10

Plot 1-10 The plots show the modulation spectrum on power level P(0) for

Channel	Frequency
512	1930.2 MHz
810	1989.8 MHz

The measurements are made per paragraph 24.238(d).

Resolution bandwidth = 1 % of the emission bandwidth = 3 kHz.
Per paragraph 24.238(b)

The highest emission bandwidth was 320 kHz.
Per paragraph 24.238(b)

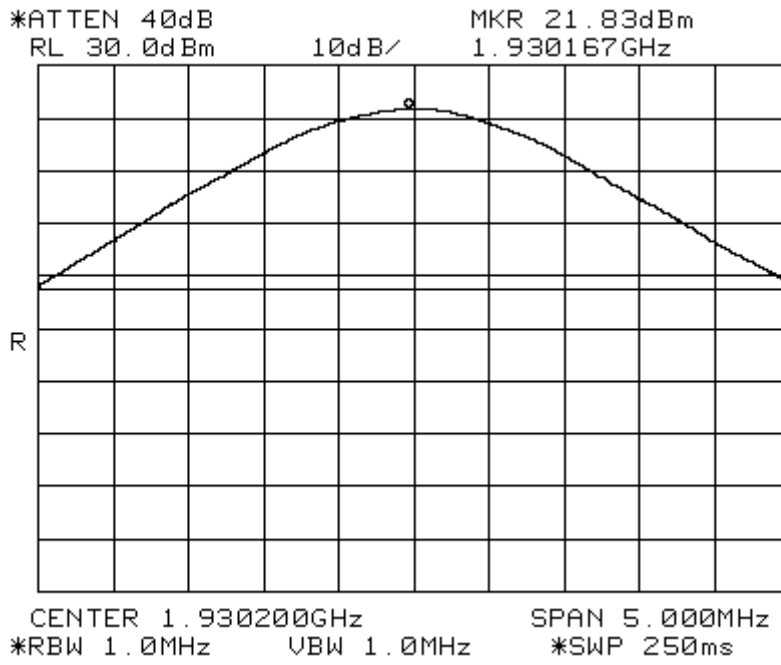
Equipment used:

Spectrum Analyzer HP 8563E (Inv. no. YY1873)
RF - Box Modulation 1900, Ericsson (Inv No XE 4912)

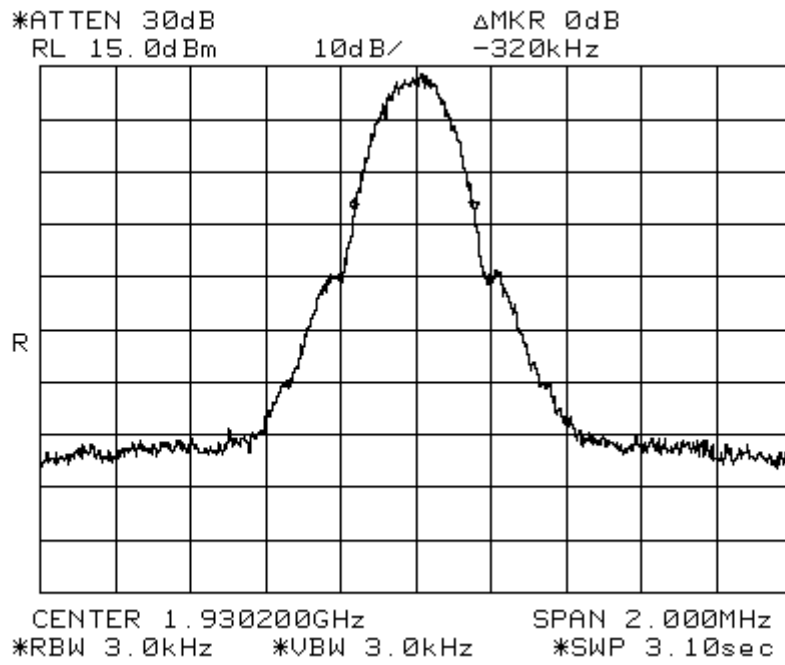
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Exhibit 6
Occupied Bandwidth plot 1
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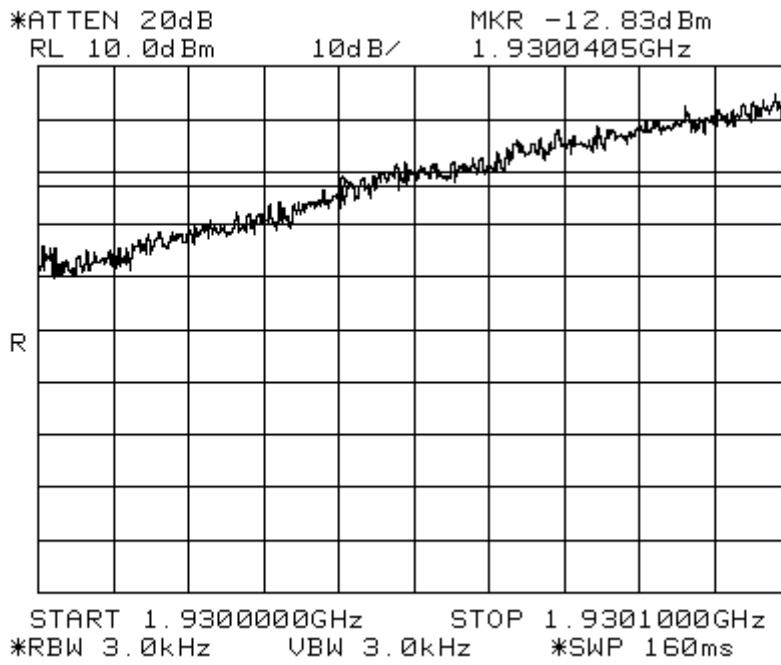
OCCUPIED BANDWIDTH



OCCUPIED BANDWIDTH



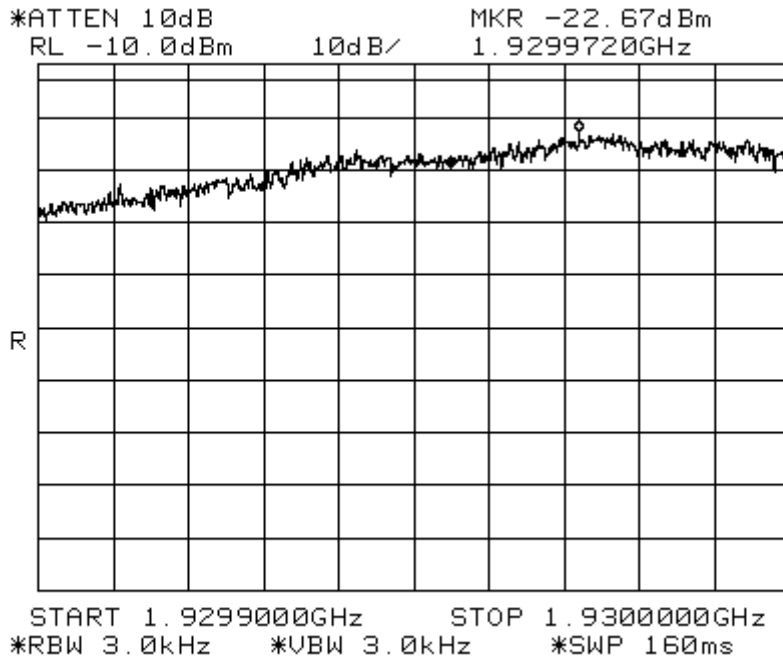
OCCUPIED BANDWIDTH



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Exhibit 6
Occupied Bandwidth plot 5
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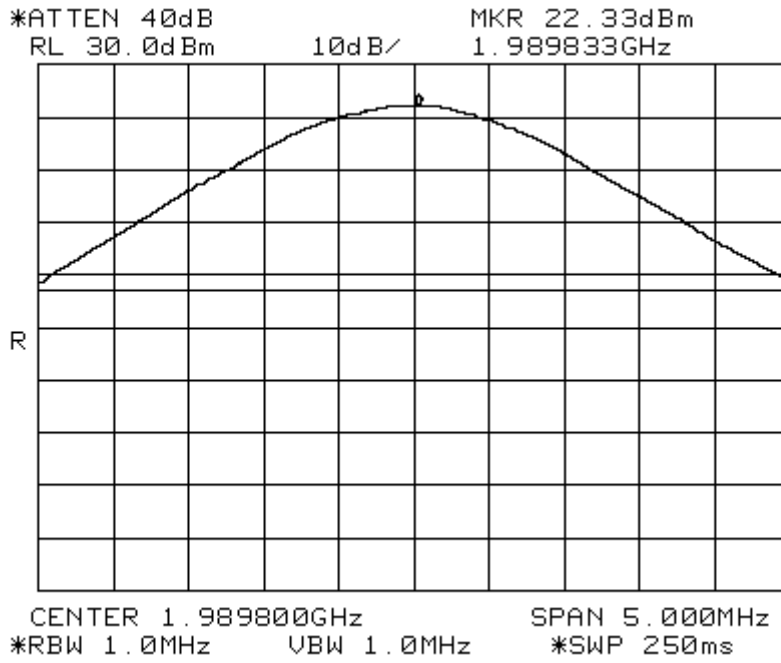
OCCUPIED BANDWIDTH



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Exhibit 6
Occupied Bandwidth plot 6
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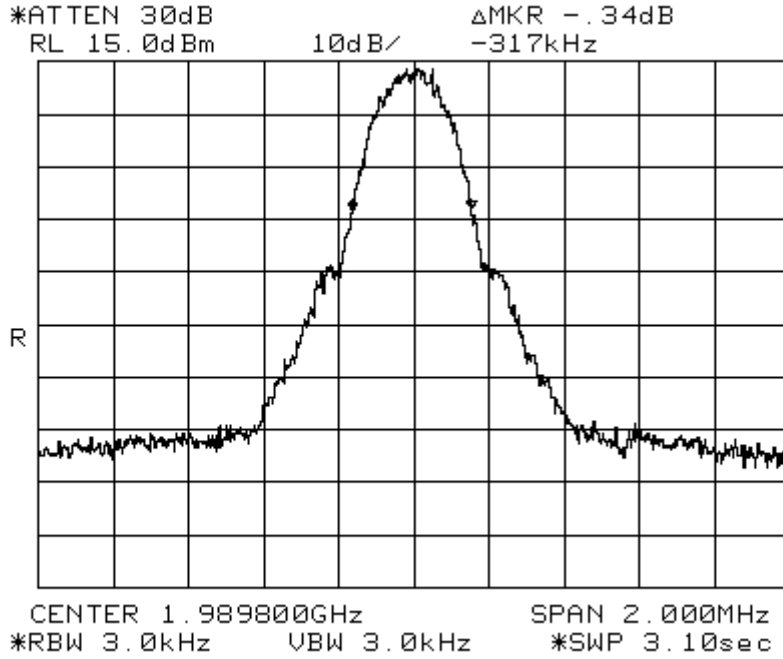
OCCUPIED BANDWIDTH



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Occupied Bandwidth plot 7
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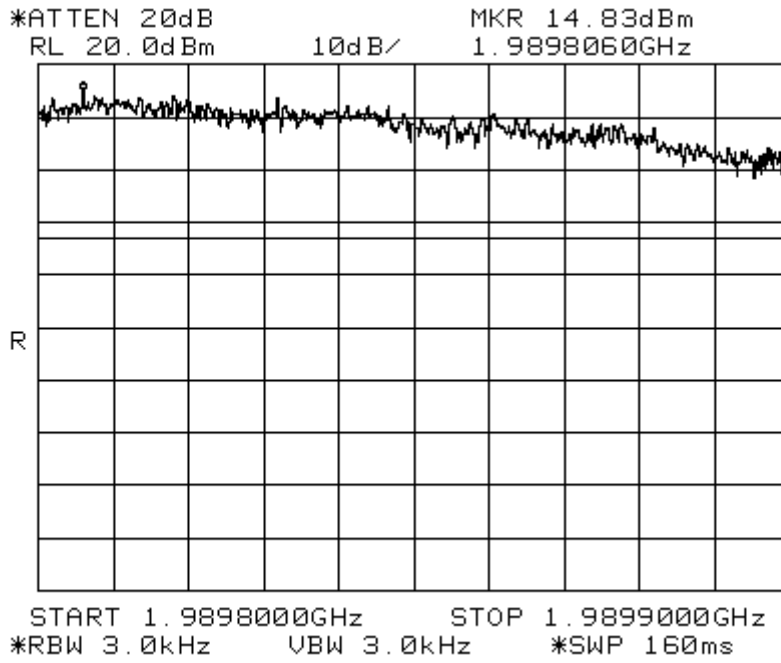
OCCUPIED BANDWIDTH



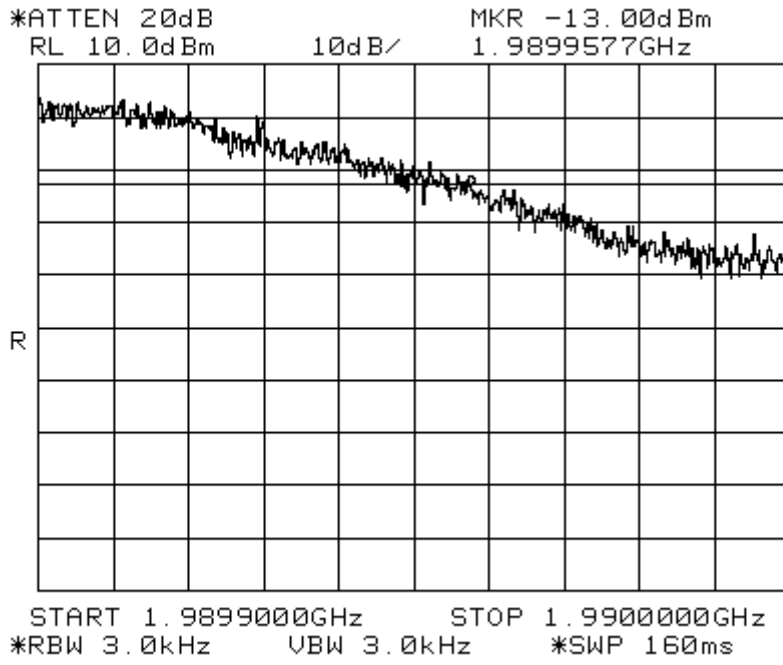
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Exhibit 6
Occupied Bandwidth plot 8
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OCCUPIED BANDWIDTH



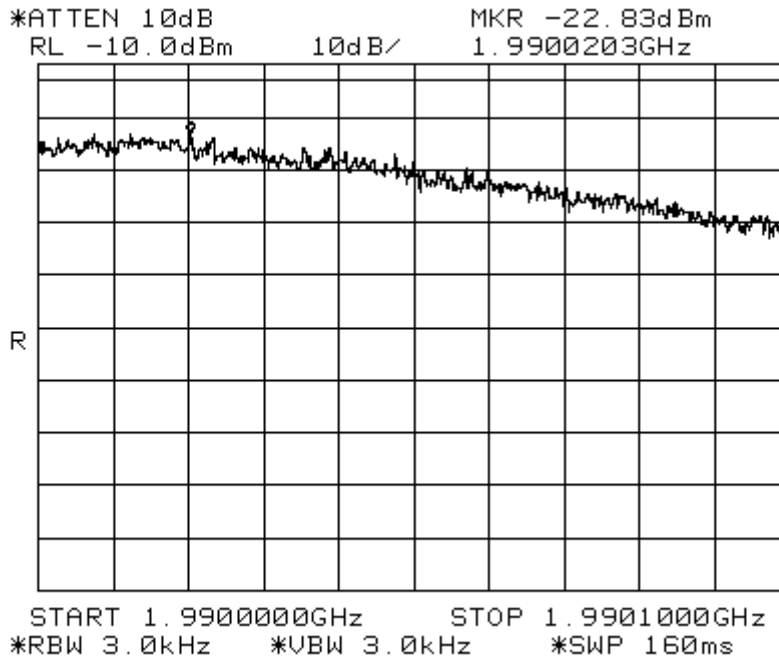
OCCUPIED BANDWIDTH



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 Ericsson Radio Systems AB

Exhibit 6
 Occupied Bandwidth plot 10
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OCCUPIED BANDWIDTH



SPURIOUS EMISSIONS

2.1051 Conducted Spurious emissions

Conducted Spurious emissions at the antenna terminal when properly loaded with an appropriate artificial antenna were measured.

Channel	Frequency (MHz)	Power Level	Result
512	1930.2	P(0)	1)
810	1989.8	P(0)	1)

1) No spurious emissions were found above -33 dBm except in the frequency range 10 GHz to 20 GHz where the highest level measured was -27.33 dBm. This was due to higher noise floor in this particular frequency range.

Spurious Emission measurements at the antenna port were performed as specified in C.F.R 47 Part 2.1051.

A spectrum analyser was connected to the antenna port of the equipment under test via a suitable cable and RF-box.

The total path loss was measured prior to testing to compensate for their inclusion.

Measurements were performed within the frequency range 30 MHz to 20 GHz in the form of "swept scans" in peak mode, employing a 1 MHz resolution B/W.

Graphs were produced giving an overview of the emissions from the Equipment under test, plotted against the appropriate specification limit.

Equipment used:

RF - Box Modulation 1900, Ericsson (Inv No XE 4912)

Spectrum Analyzer HP 8563E (Inv. no. YY 1873)

SPURIOUS EMISSIONS

2.1053 Field strength spurious radiation (emissions)

The field strength of spurious emissions were measured in the form of preliminary scans on a 3 meter range in a screened enclosure at Radio Frequency Investigation Ltd., Basingstoke, England. Any spurious emissions observed during the preliminary scans were noted and measured relative to a half wave dipole antenna at a 10 meter measurement distance on a fully compliant open area test site. Radio Frequency Investigation Ltd., is an FCC listed test facility in accordance with section 2.948 of the FCC rules. All measurements were performed in accordance with ANSI C63-4. 1992

For results and plots from the measurements refer to RFI report no: RP40144A.
This testreport can be found under Exhibit 11 RF Exposure Info.

Channel	Frequency (MHz)	Power Level	Result
512	1930.2	P(0)	1)
810	1989.8	P(0)	1)

1) No spurious emissions were found above -33 dBm.

FREQUENCY STABILITY

2.1055 Frequency Stability

Variation of output frequency as a result of either temperature or voltage variation is reported below. The measurements were made per PN3389 Vol 1.

Graph #

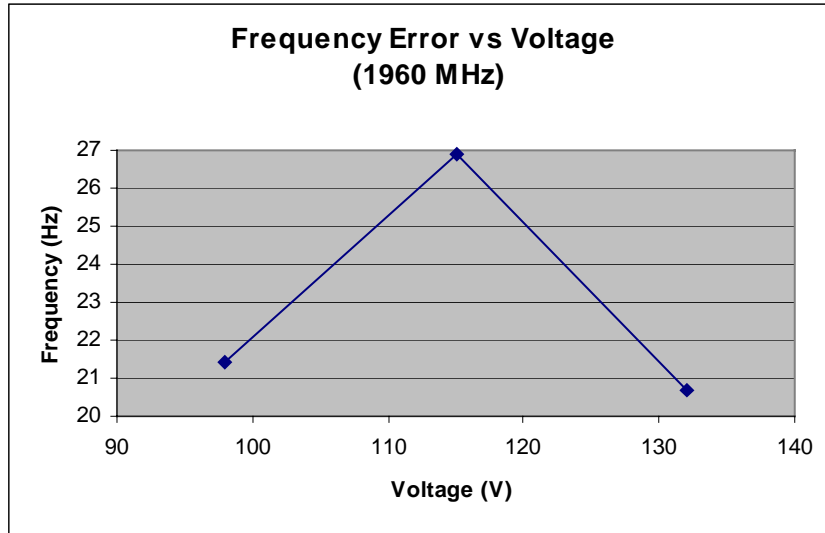
- 1 Frequency vs. Voltage at +25 °C
- 2 Frequency vs. temperature at 115 V

Equipment used:

Anritsu GSM tester MS8604A (Inv. no. YG 0690)
RF – Box, Power 1800/1900 Ericsson (LPY 107610)

Note: This RBS is designed to work from +5°C to +40°C. There is a control logic that shuts off the RBS when temperature exceeds these limits.

FREQUENCY STABILITY



FREQUENCY STABILITY

